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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,264	02/26/2002	Ermanno Filippi	Q68570	3645

7590 06/23/2005

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EXAMINER
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BHAT, NINA NMN

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/082,264

Applicant(s)

FILIPPI ET AL.

Examiner

N. Bhat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1-6 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. Specifically, the claims are narrative, i.e. "under so called pseudo-isothermal" also "intended for language in claim 2". Applicant is further advised that claim 2, should not depend from claim 1, because it is an improper product by process claim, or method of using claim. The heat exchanger should be drafted as an independent apparatus claim. Applicant can claim a process of using the heat exchanger but not the reverse as has been done in claim 2 because the limitations which on describing the heat exchanger per se does not further limit the method of carrying continuous pseudo isothermal reaction methods. Also in all of the claims applicant has used "characterized in that and such as language" which are not per se indefinite but the claim is unclear what applicant means by a predetermined reaction environment such as a catalytic bed, a selected chemical reaction. Applicant is reminded to draft the claim in clear positive meaningful language, recited the method, what are the steps of the method, providing the reactor, including the catalyst bed within the reactor, providing the heat exchanger either within the reactor or with is cooperative relationship to the reactor etc. With respect, to the "characterized in that language" applicant is suggested to replace this phrase with -- wherein--.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Dang Vu et al.

Dang Vu et al. teach an apparatus for carrying out chemical reactions in the presence of at least one catalyst in at least one reaction zone equipped with heat exchanger panels. The apparatus includes a reactor of substantially cylindrical shape as least one duct for introducing a heat carrying fluid at least one duct for withdrawing the fluid at least one duct for introducing a charge into the reactor and at least one duct for removing the reaction effluent from the reactor. The apparatus includes at least one central distributing manifold corresponding to the axis of the reactor which is situated in the upper part of the reactor, a plurality of distributing manifolds parallel to the axis of the reactor, a plurality of continuous elongated hollow plates for flow the heat carrying fluid, each plate being divide into two hold half panels. The central distributing manifold is represented by (6.2a), the plurality of receiving manifold is depicted as 6.4a, a plurality of connecting manifolds is shows as element (6.6a) and a plurality of hollow, continuous elongate plates (6.3a) each divided into two hollow half panes (t. 3 1a, and 6.3 2a). The plates are parallelepiped or rectangular in shape. But can be in any form such as square , rectangular, triangular or sinusoidal. Dang Vu et al. teach a method

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for carrying out pseudo-isothermal reactions which include providing a reactor, which includes a catalytic bed and at least one heat exchange, fed with a first flow of heat exchanger. The heat exchanger as described by Dang Vu et al. includes two wide walls , a chamber defined by the walls a fluid inlet connector, and a fluid outlet connector and a distributor. The heat exchanger of Dang Vu et al. fully anticipates applicant's invention.

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-6 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of copending Application No. 10/684,894. Although the conflicting claims are not identical, they are not patentably distinct from each other because both inventions claims method for carrying out in continuous pseudo-isothermal conditions a reactor which includes a catalytic bed and heat exchanger fed with first flow of heat exchange operating fluid at a inlet temperature and passing through a fluid according to a respective inlet/outlet path wherein fluid is fed into at least one heat exchanger at one or more intermediate

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positions. The difference between the two inventions is that in the instant application the heat exchanger is made up with a plurality of plates, which includes a central distributor and connector distributors. In the '894 application the heat exchanger is a tubular heat exchanger instead of a plate heat exchanger, it would have been obvious to one having ordinary skill in the art to substitute a plate heat exchanger for the tube heat exchanger the method of carrying out the reactions in pseudo-isothermal conditions would have been the same irrespective of the specific type of heat exchanger being used. The same method results.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

6. Applicant is advised that if the claims are amended to a heat exchanger as opposed to a method of using the heat exchanger. Applicant would be subjected to an obviousness-type double patenting rejection over 10/493,035. If applicant claims remain drawn to a method of using a heat exchanger within a catalytic reactor this would be a separate and distinct invention and therefore not subject to a double patenting rejection.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Koga et al. teach a plate shift converter. Allam et al. teach an integrated plate fin heat exchange reformation. Sung et al. teach metallic monolith and plates for the assembly thereof. Heil et al. teach a plate heat exchanger and method of making the same.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 571-272-1397. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



N. Bhat  
Primary Examiner  
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